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IN THE

SUPREME COURT OF THE UNITED STATES

OCTOBER TERM, 1954.

No. [redacted] 11

WILLIAM T. GRAHAM and GRAHAM PLOW, INC.,
Petitioners

vs.

JOHN DEERE COMPANY OF KANSAS CITY and DEERE & COMPANY,
Respondents.

ON WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE EIGHTH CIRCUIT.

BRIEF ON BEHALF OF RESPONDENTS

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IN THE

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OCTOBER TERM, 1964.

No. 580

WILLIAM T. GRAHAM and GRAHAM PLOW, INC.,
Petitioners,

vs.

JOHN DEERE COMPANY OF KANSAS CITY and DEERE & COMPANY,
Respondents.

ON WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE EIGHTH CIRCUIT.

BRIEF ON BEHALF OF RESPONDENTS

OPINIONS OF THE COURTS BELOW

The opinion of the District Court (R. 17-32) is reported, *Graham* v. *John Deere Company of Kansas City*, 216 F. Supp. 272, 137 U.S.P.Q. 864 (D.C., W.D. Mo., W.D. 1963).

The opinion of the Court of Appeals (R. 923-933) is reported, *John Deere Company of Kansas City* v. *Graham*, 333 F.2d 529 42 U.S.P.Q. 243 (8th Cir. 1964).

JURISDICTION

Jurisdiction is not challenged.

CONSTITUTIONAL PROVISIONS, STATUTES AND PROCEDURAL RULES INVOLVED

Constitution of the United States

Article I, Section 8, Clause 8.

The Congress shall have the power

To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries; * * *.

Statutes of the United States

Title 35, U.S.C. (Public Law 593, 82nd Congress, 2nd Session, Chapter 950, 66 Stat. 792, approved July 19, 1952).

§ 101. *Inventions patentable*

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title. July 19, 1952, c. 950, § 1, 66 Stat. 797.

§ 102. *Conditions for patentability; novelty and loss of right to patent*

A person shall be entitled to a patent unless—

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for patent, or

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States, or

(c) he has abandoned the invention, or

(d) the invention was first patented or caused to be patented by the applicant or his legal representatives or assigns in a foreign country prior to the date of the application for patent in this country on an application filed more than twelve months before the filing of the application in the United States, or

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or

(f) he did not himself invent the subject matter sought to be patented, or

(g) before the applicant's invention thereof the invention was made in this country by another who had not abandoned, suppressed, or concealed it. In determining priority of invention there shall be considered not only the respective dates of conception and reduction to practice of the invention, but also the reasonable diligence of one who was first to conceive and last to reduce to practice, from a time prior to conception by the other. July 19, 1952, c. 950, § 1, 66 Stat. 797.

§ 103. *Conditions for patentability; non-obvious subject matter*

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was

made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made. July 19, 1952, c. 950, § 1, 66 Stat. 798.

§ 112. *Specification*

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof. July 19, 1952, c. 950, § 1, 66 Stat. 798.

§ 282. *Presumption of validity; defenses*

A patent shall be presumed valid. The burden of establishing invalidity of a patent shall rest on a party asserting it. * * * July 19, 1952, c. 950, § 1, 66 Stat. 812.

Federal Rules of Civil Procedure

Rule 52. Findings by the Court.

(a) EFFECT. In all actions tried upon the facts without a jury or with an advisory jury, the court shall find the facts specially and state separately its conclu-

sions of law thereon and judgment shall be entered pursuant to Rule 58; and in granting or refusing interlocutory injunctions the court shall similarly set forth the findings of fact and conclusions of law which constitute the grounds of its action. Request for findings are not necessary for purposes of review. Findings of fact shall not be set aside unless clearly erroneous, and due regard shall be given to the opportunity of the trial court to judge of the credibility of the witnesses. The findings of a master, to the extent that the court adopts them, shall be considered as the findings of the court. If an opinion or memorandum of decision is filed, it will be sufficient if the findings of fact and conclusions of law appear therein. Findings of fact and conclusions of law are unnecessary on decisions of motions under Rules 12 or 56 or any other motion except as provided in Rule 41(b).

QUESTIONS PRESENTED FOR REVIEW

There is only one ultimate question presented for review:

1. Did the Court of Appeals for the Eighth Circuit err in holding U.S. Patent No. 2,627,798 invalid?

There are subsidiary questions:

2. Did the Court of Appeals apply correct standards of "invention" or "patentability"?

3. Did the Court of Appeals err in ruling that the trial court's findings of non-obvious subject matter or invention were clearly erroneous?

4. Did the Court of Appeals err in ruling that the presumption of validity was overcome?

STATEMENT OF THE CASE

Petitioners' statement is, in our opinion, inaccurate in some respects and it does not furnish sufficient factual background for adequate review. We, therefore, submit a full statement.

Plaintiffs-Petitioners, WILLIAM T. GRAHAM (the patent owner) and GRAHAM PLOW, INC. (a licensee), hereinafter called Graham, sued the Defendants-Respondents, JOHN DEERE COMPANY OF KANSAS CITY and DEERE & COMPANY, hereinafter called Deere, for infringement of United States Patent No. 2,627,798. The District Court held the patent valid and infringed (R. 17-32), *Graham* v. *John Deere Company of Kansas City*, 216 F. Supp. 272, 137 U.S.P.Q. 864 (D.C., W.D. Mo., W.D. 1963). The Court of Appeals held the patent invalid and reversed without passing on the question of infringement (R. 923-933), *John Deere Company of Kansas City* v. *Graham*, 333 F.2d 529, 142 U.S.P.Q. 243 (8th Cir. 1964).

Certiorari was granted no doubt to resolve the square conflict with the decisions of the Court of Appeals for the Fifth Circuit in *Jeoffroy Mfg.* v. *Graham*, 219 F.2d 511 (5th Cir. 1955), and *Graham* v. *Cockshutt Farm Equipment*, 256 F.2d 358 (5th Cir. 1958), holding the patent valid, and *the only ultimate issue* for review by this Court is validity of the patent.

In this statement of the case we propose to lay a proper predicate for review by presenting in order (1) the patent, (2) the immediate background of its origin, (3) the prior art, (4) the Patent Office history and (5) the litigation history.

The Patent

United States Patent No. 2,627,798 (hereinafter called 798), entitled "Clamp for Vibrating Shank Plows," was issued to William T. Graham on February 10, 1953, upon an application filed August 27, 1951 (R. 577). It relates to a spring clamp for pivotally attaching the shank of a ground working tool to the frame of a plow, the essential purpose of which is to permit the tool to pivot under spring pressure when rocks or other obstructions are encountered in the soil and return to operating position when the obstruction is cleared.

Colored enlargements of the patent drawings, Defendants' Exhibits 21-A-D,[1] have been furnished to simplify study of the structure and we invite the Court's use thereof in connection with the following discussion.

The clamp includes a main body portion or fixed member (yellow), adapted for attachment to a transverse plow beam (violet). The fixed member has a flat underface extending longitudinally from front to rear, laterally spaced side members forming a channel or way to receive a pivoted member and shank, a forwardly extending portion which provides a spring seat and rearwardly extending ears for mounting a pivot pin. A transverse pivot pin (blue) extends through the ears and a shank attaching member (dark green) is pivoted thereon. The shank attaching member has an elongated plate portion with a flat upperface corresponding with the underface of the fixed member and a flat underface corresponding with the upperface of the shank of a ground working tool, and at the rear there is a depending stirrup or loop (light green). The upper forward portion of the shank (pink) extends through

1. To avoid needless repetition of record references for exhibits, we point out that all of the exhibits were offered and received in evidence at R. 235-239, 517-521 and 574-575.

the stirrup and forwardly underneath the plate and is fastened thereto at the forward end by a bolt and nut (light green), whereby the shank attaching member and the shank pivot together about the axis of the pivot pin. A coil spring (orange) is seated on the forward portion of the fixed member and through a washer, nut and rod (brown), acts on the shank and plate to resiliently urge the forward ends thereof upwardly toward the fixed member, with the upperface of the plate member in stop engagement with the underface of the fixed member to position the shank for normal operation.

In plowing operations forces are exerted upon the ground working tool which tend to force the tool rearwardly and upwardly and when those forces are sufficient to overcome the force of the spring, the shank and plate member pivot on the pivot pin with the forward end of the shank and plate moving downwardly against the tension of the spring. When the ground forces are reduced the spring tension returns the tool to normal position. The stirrup at the rear of the plate cooperates with the forward bolt and nut to maintain connection of the shank and pivoted member during all phases of operation.

There is no substantial dispute as to the foregoing structure and operation, but there is sharp dispute as to one other feature—the feature upon which Graham now relies to sustain the patent.

Graham contends that the arrangement of the shank below the plate of the shank attaching member permits the forward portion of the shank to flex or bend *away from the plate* when heavy forces are exerted on the ground working tool, whereas in the prior art structures the arrangement of the shank relative to the plate of the pivoted member is such that the portion of the shank alongside the plate will flex or bend *toward the plate*. This difference, he says, produces

a significantly different and superior flexing of the shank. The difference in arrangement is apparent and we also recognize the *theoretical* difference in the direction of shank flex relative to the plate member, but we deny that those minute differences are of any consequence to performance of patentability. Furthermore, the asserted shank flex is not taught by the patent and is contrary to the claims.

With the 798 structure and operation in mind, let us consider its origin.

Background and Development of 798

The so-called "chisel plows" date at least from the 1930's. For example, see the Noell patent at R. 781. The typical chisel plow consists of a mobile frame with multiple transverse beams to which multiple spring steel shanks are attached by clamps. The term "chisel plow" results from the chisel type ground working tools which are frequently used, but a variety of other ground working tools are also used, depending upon the particular ground work to be done (R. 155-158).

In areas where the soil is free of rocks or other obstructions the shanks are normally attached to the plow beams by rigid clamps and the tools operate with a vibratory action which results from the inherent resiliency of the spring steel shanks (R. 152-155). When such plows were introduced into the glacial rock country of the North and Northwest in the mid to late 1940's considerable breakage and bending of parts resulted from the rocky conditions. To meet that problem Graham devised a spring clamp, Defendants' Exhibit 6, and obtained a patent thereon, United States Patent No. 2,493,811 (hereinafter called 811), issued January 10, 1950 (R. 717). Clamp 811 met the rock problem satisfactorily and Graham and his companies have manufactured and sold that clamp, with some modifications, from

about 1947 down to the present time (R. 241-242 and Finding V).

Colored enlargements of the 811 patent drawings are in evidence as Def. Exs. 14-A, B and C and there is obvous similarity to 798 in many respects. The main clamp body or fixed member (yellow), which is fastened to the transverse beam (violet), has a longitudinally extending underface, laterally spaced side members forming a channel or way to receive a shank and pivoted member, and ears at the rear, through which extends a transverse pivot pin (blue). Mounted upon the pin is an elongated pivoted member (dark green), called a "fulcrum plate" in the patent. At the rear of the plate member there is a downwardly facing recess which rides upon the pivot pin and at the forward end there is a similar downwardly facing recess which rides upon a T-shaped head of a spring rod (brown). The upper forward portion of the shank (pink) of a ground working tool is positioned between the underface of the fixed member and the upperface of the pivoted member. A coil spring (orange) is seated upon a forward portion of the fixed member and its pressure is transmitted through a washer, nut and rod (brown) to the pivoted member and shank to resiliently urge them upwardly toward the fixed member. In addition to transmitting the spring pressure, the spring rod passes through registering openings of the fixed member, shank and pivoted member and resists the rearward thrust or pulling load of the shank in plowing operations. Stop engagement of the upperface of the shank with the underface of the fixed member positions the shank for normal operation and when rocks or other obstructions are encountered the shank is permitted to pivot and return to normal position under the influence of the spring.

The specific structure of the 811 clamp produces some operating peculiarities. During the pivoting action the

fulcrum plate pivots about the pivot pin upon which it is mounted but the shank pivots about the upper rear surface or heel of the fixed member. Thus, with different pivotal axes for the fulcrum plate and shank, and with the spring rod carrying both the vertical thrust of the coil spring and the rearward thrust of the shank, there is a longitudinal sliding movement of the shank relative to the fulcrum plate and the fixed member. Those structural and operational characteristics result in wear on the rear of the fixed member where the shank pivots and rubs, wear on the forward portion of the fixed member and spring rod where the rod scrubs against the fixed member, and some binding of the spring rod which impedes the free action of the coil spring. In addition, it has been observed that there is noticeable looseness of the shank within the mounting and quite a large range of lateral movement or fishtailing of the shank in operation (Fenton, Graham's expert, R. 163-170, 172-175. Graham, R. 242-243. Fishleigh, Deere's expert, R. 272-279).

It is clear from the 798 File Wrapper (R. 678, *et seq.*) and Mr. Graham's testimony (R. 245-251) that 798 was devised to improve 811, and to accomplish the improvement essentially two things were done: (1) the shank was fastened to the pivoted member by a stirrup at the rear and a bolt at the front, and (2) the pivoted member and pivot pin were moved above the shank (R. 247, 254).

There is no testimony in the record of any long struggle, search or experimentation to effect those changes. On the contrary, the devising steps were preliminary pencil sketches by Graham (R. 255-256), then some drawings by his employee, Rose Proctor, at his instruction about March, 1950, and May, 1951 (Stipulation, Paragraph 6, R. 15), and a patent application filed on August 27, 1951. The 798 clamp has never been manufactured or sold by William T.

Graham, the Graham companies, or any licensee under them (Finding V), and there was never even a field test until 1962, and then only a modified version (R. 251-253). Graham's avowed purpose to improve and make a better clamp was accomplished on paper only and he has never put it to use.

Having considered what was done, next consider the disclosures of the prior spring clamp art.

The Prior Art

Five prior patents were made of record in the Patent Office during Graham's prosecution of the 798 application. They appear at R. 705-742 and are:

UNITED STATES PATENTS

Patentee	Patent Number	Date of Issue
Drader, et al	417,775	Dec. 24, 1889
Pfeifer	2,014,451	Sept. 17, 1935
Graham	2,493,811	Jan. 10, 1950

FOREIGN PATENTS

		Denmark
Petersen	57,391	Mar. 18, 1940
		Australia
Traeger	111,910	Nov. 21, 1940

Deere cited in its answer (R. 5) ten additional prior patents which appear at R. 743-794:

UNITED STATES PATENTS

Dunbar	211,003	Dec. 17, 1878
Carter	231,268	Aug. 17, 1880
Cobb	284,278	Sept. 4, 1883
Rix	287,965	Nov. 6, 1883

UNITED STATES PATENTS

Moore	503,288	Aug.	15,	1893
Lamprell, et al	1,141,804	June	1,	1915
Roberts	1,805,599	May	19,	1931
Erdman	1,982,862	Dec.	4,	1934
Noell	2,029,249	Jan.	28,	1936

FOREIGN PATENTS

		Australia		
Prior	1056/26	Mar.	29,	1927

and two prior use devices: the Jeoffroy SC-580 Spring Clamp, Def. Ex. 2, and the Glencoe Spring Clamp, Def. Ex. 3. Colored drawings of those clamps are in evidence as Def. Exs. 18 and 17, respectively, and the priority of both clamps is established by stipulation (R. 16, Paragraphs 9 and 10).

The art of spring clamps is old and well developed and a brief study of the representative group shown on the colored chart, Def. Ex. 11, will reveal its scope and simplicity. Included on the chart are three of the patents cited by the Patent Office (Graham 811, Petersen and Traeger) and three patents and two devices not cited by the Patent Office (Dunbar, Cobb, Rix, Jeoffroy SC-580 and Glencoe).

Mr. Fishleigh, an eminently qualified expert (R. 257-261), pointed out (R. 262-3) that the art exhibits at least seven mechanical elements, to wit:

1. A transverse frame member, colored violet;

2. A fixed clamp member, colored yellow;

3. A pivoted shank-attaching member, colored dark green;

4. A pivot pin, colored blue, for pivotally connecting the shank-attaching member to the fixed member;
5. A shank for a ground working tool, colored pink;
6. Means, colored light green, for connecting the shank to the pivoted shank attaching member; and
7. Spring means, colored brown and/or orange, for resiliently holding the ground working tool in operating position;

and it is apparent that those seven elements are disclosed in a variety of forms and arrangements.

Dunbar, Cobb and Rix

These three old patents (R. 745, 755 and 759) relate to spring clamps for harrows and it will be sufficient to discuss only one of them.

The Rix patent of 1883 shows all seven of the mechanical elements. To the beam (violet) is attached a bolt or fixed member (yellow), having an eye on one end to receive a pivot pin (blue). A shank-attaching member (dark green) is pivoted on the pivot pin and the shank (pink) of the ground working tool is connected to the pivoted member by a loop or stirrup (light green) at the lower end and a bolt and nut (light green) above. The spring means is a coil spring (orange) and a rod (brown) connected at one end to a support on the beam and at the other end to the pivoted member. The stop to position the ground working tool for normal operation is provided by contact of the upper end of the pivoted member with the nut on the spring rod, and in operation the shank is permitted to pivot and return to normal position under the influence of the spring (R. 269-272).

Petersen

The Denmark patent of 1940 to Petersen (R. 727) involves a light cultivating tool, called a horse hoe in the patent, in which the shank of the ground working tool is substantially vertical as in Dunbar, Cobb and Rix. There is a transverse beam (violet) to which a fixed clamp member (yellow) is attached by bolts. The fixed member has laterally spaced sides forming a channel, with a pivot pin (blue) passing therethrough. Pivoted on the pin is a shank-attaching member (dark green) to which the shank (pink) of the ground working tool is attached by means of a loop and a setscrew (light green). A coil spring (orange) with an adjusting bolt (brown) is seated at one end against the fixed member and at the other end against the pivoted member. The stop for positioning the shank for normal operation is provided by a beak 17 on the pivoted member which contacts a shoulder 18 on the fixed member and in operation the shank is permitted to pivot and return to normal operating position under the influence of the spring (R. 285-9).

Traeger

The Australian patent of 1941 to Traeger (R. 735) is entitled "An Improved Spring Tyne for Agricultural Implements," but it reveals a spring clamping means which permits the rear portion of the spring tyne to pivot and return to normal operating position under the influence of coil springs. The drawings do not show the transverse beam or the means for attaching the tyne to the beam, but it appears from the specifications that the upper portion of the two-part L-shaped spring tyne would be secured to the frame of the implement by bolts or other fastening means; thus the upper portion of the tyne which is fixedly attached to the beam may be considered as the fixed part

of the mounting, and it is therefore colored (yellow). At its rear there is an eye to accommodate a pivot pin (blue). Mounted on the pivot pin is a shank attaching member (dark green) to which the shank (pink) of the ground working tyne is affixed by means of a rivet (light green). The forwardly extending portion of the lower tyne terminates at its forward end in a loop which connects with the spring means. The spring means comprises two coil springs (orange) which are seated upon a helper on the fixed element and two rods, washers and nuts (brown). The stop to position the tyne for normal operation is provided by direct contact of the forward end of the pivoted portion of the tyne with the rearward portion of the fixed element and in operation the ground working tool pivots to clear obstructions and returns to normal operating position under the spring pressure (R. 279-283).

Graham 811

The Graham 811 patent has been fully discussed, *supra*, pp. 9-11, and we emphasize only one additional point here. It contains the same basic mechanical elements as the other prior art devices *except* that there is no true or separate means for fastening the shank to the pivoted member (R. 277-278).

Jeoffroy SC-580

The Jeoffroy SC-580 Spring Clamp was held to infringe the 811 patent in *Jeoffroy Mfg.* v. *Graham*, 206 F.2d 772 (5th Cir. 1953), and of course it is quite similar to 811, but it has some structural differences which should be noted. The pivoted member (dark green) has a true pivotal connection at the rear rather than a recessed bearing, as in 811. The spring rods (brown) do not pass through the shank (pink) and do not carry the rearward thrust

or pulling load of the shank. There is an interlocking nib and socket arrangement which is normally sufficient, under the pressure of the two coil springs (orange), to maintain the shank and pivoted member in their operating association and prevent the shank from being pulled out of the mounting, but, as in 811, there is not a true fastening means for attaching the shank to the pivoted member. The stop for normal positioning of the shank is direct contact of the upperface of the shank with the underface of the fixed member and the general operation is quite similar to 811. All of the seven mechanical elements of the other prior art structures are present *except* the fastening means (R. 296-302).

Glencoe

The transverse frame member (violet) of Glencoe is a common angle iron and its fixed clamp member (yellow) naturally is shaped to conform with that particular beam and is attached thereto by bolts. Laterally spaced sides of the fixed member form a channel or way to receive a pivoted member and shank and a pivot pin (blue) extends therethrough. Pivoted on the pin is a shank-attaching member (dark green) of elongated plate formation with a loop (light green) at its rear. The upper forward portion of the shank (pink) of a ground working tool extends through the loop and forwardly along the upperface of the pivoted member and is attached thereto at the front by a nut and bolt (light green). Two concentric coil springs (orange) are seated on a forward extension of the fixed member and through a washer, nut and rod (brown) act upon the pivoted member and shank to urge them upwardly to stop engagement with the fixed member. The stop to position the shank for normal plowing operation is a downwardly extending lug of the fixed member which contacts a corresponding upwardly extending lug of the pivoted

member. When rocks or other obstructions are encountered in the soil the shank and pivoted member are permitted to pivot about the axis of the pivot pin and return to normal position under the influence of the spring (R. 289-295). It is obvious that all of the mechanical elements previously noted in the other art and *all of the mechanical elements of 798 are present in Glencoe.*

The Prior Art As a Whole

We believe it is accurate to say that the foregoing prior art reflects the common use of spring clamps for over seventy years in farm implements, ranging from wooden frame harrows to the more recent chisel plows, that those clamps have contained in varying forms and arrangements the seven mechanical elements heretofore set out and that they all have a basically similar purpose and mode of operation, *i.e.,* to resiliently and pivotally mount a ground working tool upon a frame so that the tool may pivot in response to rocks and other obstructions in the soil and return to normal operating position under spring pressure.

With the art in mind, let us consider the 798 application and its progress through the Patent Office (File Wrapper and Contents, R. 659-704).

Patent Office History of 798

The Patent Office history of 798 is particularly important because of the extreme divergence between the distinctions and contentions made there and those subsequently made in the courthouse.

The application contained twelve initial claims (R. 667-675), all of which were rejected in the first Office Action (R. 685-686).

Claims 1 through 9 were rejected on Graham 811 as failing to patentably distinguish therefrom, the Examiner stating:

> "The expedient reversal of the relative positions of the elements 34 (the shank) and 63 (the pivoted member) of Graham (811) and the mere provision of a fastening means between the forward ends of said elements are considered matters of design well within the expected skill of the art and devoid of invention. Clearly no new or unexpected result is obtained by these expedient modifications within the scope of the combination."

Claims 1 through 9 were further rejected on Graham 811 in view of Petersen and Drader (R. 707), Petersen as suggesting the disposition of the Graham pivoted member above the shank, and Drader as suggesting the use of fastening means in the forward ends of the shank and pivoted member.

Claims 10, 11 and 12 were rejected for the same reasons, in view of Pfeifer (R. 711). Pfeifer was cited for an element that is not in the allowed claims and it is not material to this case.

In response (R. 687-693), Graham cancelled the twelve original claims, substituted Claims 13 and 14, and argued the following achievements and distinctions:

1. The 798 structure is an *improvement over 811* because it substantially *reduces wear* and *reduces the time and expense of repair*. He advised the Examiner that in 811 there is wear on the fixed member where the shank rubs in pivoting and that such wear is eliminated in 798 by placing the pivoted member between the shank and the fixed member and by locating the pivot pin so that there is no rubbing contact with the fixed member. With that arrangement the vibratory movement of the shank is on the

pivoted member, a less expensive part which is easier to replace.

2. Petersen, a foreign reference, and the modification of 811 suggested thereby, *i.e.*, mounting the pivoted member between the shank and fixed member, were distinguished because:

(a) In Petersen the groundworking *teeth are mounted vertically and the contacting faces of the mounting parts are thus vertically transverse* to the movement of the implement.

(b) The stop which positions the tool in Peterson is a beak 17 on the pivoted part which engages a shoulder 18 of the fixed part *with resulting rubbing wear on the fixed part.*

(c) The contacting faces of 798 *extend substantially the full length of the mounting and no one portion of one face contacts another face before other portions come into contact;* consequently, the 798 stop faces are not equivalent to the beak and shoulder of Petersen.

(d) Petersen has only *a single means for fastening the shank to the pivoted member and that means is at the pivotal end.* There is no means for connecting the shank to the pivoted member at both ends, as in 798.

3. Traeger, a foreign reference, was distinguished on the ground that the shank 2 would have *rubbing contact* with the eye 4 on the fixed part of the clamp and because there was *no suggestion in Traeger for mounting the plate of the pivoted member between the shank and the fixed part.*

4. Drader, cited by the Examiner as showing fastening means which could be used to connect the shank and pivoted member at the forward end, was avoided on the

ground that the Examiner had improperly applied it because neither of the principal references (Graham 811 and Petersen) *suggest a connection of the forward end of the shank with the forward end of the pivoted plate,* particularly when such connection is used with an *embracing means at the opposite end* of the engaging face portions of the respective mounting members.

In pointing out the specific distinctions in the two new claims he noted particularly (1) the longitudinally extending underface of the fixed member, (2) the corresponding and contacting upperface of the pivoted member, (3) the means connecting the shank and pivoted member to maintain the upperface of the shank in constant continuous contact with the underface of the pivoted member, and (4) the position of the pivot pin. (It should be noted here, because it will become very material later, that *Graham did not mention or suggest any difference in shank flex.*)

The response satisfied the Examiners; no further art was cited; the two claims were allowed, and we invite the Court's attention to the specific details of the claims and their application to the structure as set out on the colored claim charts, Def. Exs. 22 and 23.

Finally, to complete the predicate for review, let us see what has happened to the patent in the courthouse.

Litigation History

Graham v. Jeoffroy

About one year before 798 was issued Jeoffroy placed its HT-5 Spring Clamp, Pl. Ex. C, on the market and filed suit in the United States District Court at Amarillo for declaratory judgment that HT-5 did not infringe the 811 patent. Graham counter-claimed, charging infringement of 811, and the case was pending when 798 issued. Graham

immediately amended to charge infringement of 798. Jeoffroy challenged validity and the trial court, in an unpublished opinion, held 798 *invalid* in the following language (R. 914-915):

"PATENT No. 2,627,798

"The recent Graham structure covered in the above numbered patent, issued in 1953, is a plain counterpart of the accused structure made by Jeoffroy. The same reasons for finding infringement (of 811) against Jeoffroy, also disclose invalidity of this latest Graham patent. It is a case of double patenting between the two Graham patents, and so under the ban of a well settled rule of patent law. If the said patent were not invalid as a double patent, *in any event it would be for lack of invention.* This patent 798 does mark *an improvement bettering efficiency and economy over patent 811, but that is not enough to constitute invention.* The said patent 811 was the springboard and from that vantage background the next step from that structure to the structure of patent 798, *was well within the capacity of a skilled mechanic.*" (Emphasis added).

The Court of Appeals for the Fifth Circuit reversed, *Jeoffroy Mfg.* v. *Graham*, 219 F.2d 511 (5th Cir. 1955), holding the patent valid on the following grounds, pp. 518-519:

"Our interpretation of the prior art, the physical exhibits, and the testimony, however, compels us to *disagree* with the learned district court's conclusion that the 798 patent is invalid, either for 'double patenting' or lack of invention. Though we do agree that 798, as an improvement combination, is not entitled to any broad degree of protection over 811, it still seems to us that *its hybrid type structure combining the wear-resisting rotating pivot, in part reminiscent of the prior art, with the new shank and stirrup arrangement permitting some of the same advantageous flexibility inherent in the old 811 structure, reveals sufficient indicia of novelty and invention to justify limited protection.*

> * * * Other factors strongly influencing and, we think, reinforcing our conclusion as to the validity of 798 are: * * * (3) *the further rule, long recognized by this Court, that an improvement combination is patentable even though its constituent elements are singly revealed by the prior art, where, as here, it produces an old result in a cheaper and otherwise more advantageous way;* * * * *We conclude, therefore, that Graham's 798 patent* is not invalid, either for 'double patenting' or lack of invention, but *exhibits patentable novelty and invention not effectively anticipated by any of the prior art patents or alleged public uses relied upon.*" (Emphasis added).

Jeoffroy sought certiorari and the petition was denied, 350 U.S. 826, presumably because there was then no conflict with any other circuit on this patent.

Graham v. Cockshutt

The next chapter was *Graham* v. *Cockshutt Farm Equipment*, 256 F.2d 358 (5th Cir. 1958). Cockshutt challenged validity, citing the same prior art as in the *Jeoffroy* case, plus Rix, Roberts and Glencoe, and denied infringement. The trial Judge, constrained by his reversal on validity in *Jeoffroy*, held the patent valid but not infringed, his unpublished letter opinion making no analysis of the additional art. The Fifth Circuit affirmed and the portion of the opinion relating to validity, 256 F.2d at 359, is as follows:

> "* * * We conclude * * * after careful consideration, that our decision previously made as to the validity of this patent should stand. * * *
>
> "As pointed out above, no part of this device is itself patented or subject to patent, since every one of the parts is old, and its use independently in the present combination is a long known use. *It is only because this particular arrangement of these known*

elements adopted by Graham achieves the result better than the prior art afforded that Graham was entitled to a patent." (Emphasis added.)

Graham v. Deere

Then Graham sued Deere in the Western District of Missouri and the trial court sustained 798 with the following findings:

"XI. Defendants place principal reliance upon the prior art patents to Cobb 284, 278 and Rix 287,965 and the prior device of Glencoe, and contend that the usual presumption of validity does not apply because the Patent Office failed to consider these patents and device, as well as the other additionally cited prior art. All of the prior art cited by defendants was before the Court in the Fifth Circuit in Graham v. Cockshutt, wherein the decision, 256 F.2d 358, held the Graham patent valid, but not infringed. The disclosures of the prior art not cited by the Patent Office, and particularly the Cobb and Rix patents and the Glencoe device, are similar to some of the patents relied upon by the Patent Office Examiner, as for example, the Danish patent of Petersen. Hence, the statutory presumption of validity of the Graham patent in suit is not weakened or destroyed.

"XII. The prior art as a whole in one form or another contains all of the mechanical elements of the Graham 798 structure, and in a broad sense all of the elements are found in one single reference, the Glencoe clamp. However, the particular arrangement of the elements disclosed by 798 is not present in any single reference or as a whole.

"XIII. An improved functional result is obtained by the Graham 798 structure and the main improvement is due to the particular arrangement of the shank in relation to the pivoted member and spring member which reflects in downward flexing of the shank

at the forward portion thereof alongside the plate portion of the pivoted member and does lessen wear and tear to some parts of the clamp.

"XIV. The Glencoe structure uses a rotating pivot which prevents rubbing contact of the shank with the fixed member of the clamp and means for attaching the shank to the privoted member which permits flexibility of the shank posteriorly to the rear of the pivoted member equal in magnitude to that which would be expected in the Graham 798 patent structure. However, the flexing of the shank is different in direction and location relative to the pivoted member than that which occurs in the Graham 798 structure. The Graham 798 patent is an improvement patent and, while the individual mechanical elements may be found in the prior art, taken as a whole the Graham 798 structure is sufficiently different in the operative relationship of the shank and pivoted member with a slight but significant difference in the flexing of the forward portion of the shank that is not found in the prior art, so that the Graham 798 patent involves invention.

"XV. The differences between the Graham 798 patent and the prior art are such that the Graham 798 structure, as covered by claims 1 and 2 thereof, would not have been obvious at the time Graham made his invention to a person having ordinary skill in the art of agricultural implements and other related arts. It would not have been obvious to a man having ordinary skill in the art to have taken certain components of the prior art and to have combined them in the manner disclosed and claimed in the Graham patent. Even with the full benefit of hindsight, it cannot be said that the Graham structure represents no more than skilled craftsmanship.

"XVII. It demanded invention of the quality required by the Patent Statutes, Title 35 U.S.C., to produce the structure of the Graham 798 patent. De-

fendants have failed to sustain the burden imposed by § 282, Title 35 U.S.C."

In the course of its opinion, the trial court noted that the patent had been held valid by the Fifth Circuit in the *Jeoffroy* and *Cockshutt* cases, but did not cite or analyze any other authorities.

The Court of Appeals for the Eighth Circuit reversed with three principal rulings: *first*, that the trial court failed to apply a proper standard of invention; *second*, that the trial court's finding that 798 exhibits invention and would not have been obvious to a person having ordinary skill in the art was without adequate evidentiary support and was clearly erroneous; and, *third*, that 798 exhibits mechanical skill only and would have been obvious to a person having ordinary skill in the art. As an incidental matter, the court also ruled that the presumption of validity is weakened when applicable prior art is not considered by the Patent Office.

In the following argument we propose to show that the decision of the Eighth Circuit is correct and the decisions of the Fifth Circuit were wrong.

SUMMARY OF THE ARGUMENT

The 798 spring clamp is one of several in a well developed art. It contains no new element and merely reflects a somewhat different arrangement of the old elements. The changes over the prior art were plainly indicated and would have been obvious to one having ordinary skill in the art. No new or unexpected result was obtained and there was no substantial or unexpected change in the functions of the individual elements. The alleged accomplishments of some reduction in wear to some parts

of the clamp and a slight difference in the flex of the shank were obvious consequences of the rearrangement. Furthermore, the alleged difference in shank flex is unimportant and it was not disclosed or claimed. The subject matter as a whole would have been obvious to a person having ordinary skill in the art. The patent is invalid and the Court of Appeals for the Eighth Circuit correctly so ruled.

Section 103 of the Patent Act of 1962 merely paraphrased and adopted as a condition of patentability the standards of invention established by this Court. It made no material change in the law and the tests previously announced by this Court are proper tests under the statute. In any event, however, if Section 103 did make any change it is immaterial in this case because the Court of Appeals for the Eighth Circuit carefully applied both the cases and the statute and found the 798 patent lacking.

The judgment of invalidity should be affirmed.

THE ARGUMENT

Introduction

This is the first case in which the Court has granted certiorari on the question of patent validity since passage of the Patent Act of 1952, and it has excited considerable interest as evidenced by the briefs of amicus curiae.

The amicus curiae present somewhat different arguments and conclusions as to the effect of the Act on patentability, but in general they (and Graham) argue that Section 103 of the Act established a statutory test or standard of "invention" or "patentability" which changed existing law (at least to some extent) and that Section 103 is now the only test which may be used.

No doubt a decision as to the status of the law is important and we will deal with that matter in due course, but we think it is appropriate first to dispose of the patent in suit because it does not meet any legitimate test, regardless of whether the test is phrased in the language of Section 103 or in the language of the decisions of this Court.

POINT I.

The Court of Appeals for the Eighth Circuit Correctly Held Patent No. 2,627,798 invalid.

A Combination of Old Mechanical Elements

The prior art plainly shows that spring clamps for ground working tools are *not new*. It further shows that spring clamps for "chisel plows" are *not new* and that 798 is merely one such clamp in a well developed art. Graham does not challenge the trial court's finding (Finding XII) that all of the mechanical elements of 798 are present in the prior art in a variety of forms and that all of the elements in a broad sense are present in the Glencoe clamp. It is clear, therefore, that we are dealing with a patent which exhibits *no new element*, and its validity must stand or fall on the *combination* of elements and the achievements thereof.

If the *particular arrangement* of the elements as disclosed in 798 had been shown in the prior art, the patent would of course be invalid by reason of anticipation (or lack of novelty) as set out in Section 102 of the statute and there would be no need to proceed further. We frankly concede, however, as the trial court found (Finding XII), that the *particular arrangement* of the elements disclosed by 798 is not shown in the art and we turn our attention to the controlling question whether 798 discloses "non-obvious subject matter" or "invention."

What was Graham's problem and purpose in designing 798? Several years' experience with his 811 spring clamp had shown some undesirable wear factors and his avowed purpose was to eliminate some of that wear and improve the clamp.

What did he do? He made some drawings modifying his 811 clamp (1) by fastening the shank to the pivoted member by means of a stirrup at the rear and a bolt at the front, and (2) by moving the pivoted member and pivot pin to a position above the shank.

To what extent were those changes or modifications plainly indicated by the art and to what extent were they within the expected capacity of one skilled in the art?

Obvious Modifications

The changes in the form of the pivoted member and the shank fastening means are almost too simple to justify discussion. The Patent Office Examiner relied upon Petersen as teaching the shank embracing stirrup and Drader as suggesting the fastening means and Graham distinguished in part on the ground that those references did not show a *stirrup at the rear* and a *bolt at the front.* Much better references would have been Rix and Glencoe, both of which show a shank fastened to a pivoted member by *a stirrup at one end* and *a bolt at the other.* It would be difficult to imagine a more precise teaching of the 798 pivoted member and shank fastening means and the conclusion is inescapable that it required only mechanical skill (and very little of that) to adapt them for use in the Graham clamp.

The relocation of the shank attaching member and pivot pin *above the shank*[2] is not quite so precisely taught

2. A pivot pin and pivoted member *above the shank* are shown in Drader (R. 707) and Erdman (R. 777) but it might not be proper to call the pivoted member a plate.

in the art but it is nonetheless the product of mechanical skill only. The only problem was to select a position and arrangement of the pivot pin and pivoted member which would avoid rubbing contact and wear upon the fixed member. Pivot pins and shank attaching members are shown in almost every conceivable position in the art and surely any skilled engineer, pattern man, mechanic or even blacksmith could arrange those parts so as to avoid rubbing contact with the fixed member. It would seem equally elementary that any skilled mechanic could invert the positions of the shank and pivoted member without resort to any prior patents or devices, and if emphasis is placed upon the position of the pivoted member *between* the shank and fixed member, rather than *above* the shank, that relationship is shown in the Rix and Petersen patents.

Skill in the art is not confined to the specific disclosures of prior patents and devices; it also includes the basic capacities which ordinary craftsmen are bound to have in working with the materials and tools of their trade, and surely it is not necessary that they have a picture to guide them in every modification that is made. Surely they must have the capacity to change forms and shift positions to accomplish desired modifications of existing devices. *That is all that was involved here.*

Mr. Fishleigh prepared two colored charts, Def. Exs. 24 and 25, demonstrating how a skilled mechanic might make obvious use of the prior art disclosures and teachings to devise a structure substantially the same as 798 (R. 319-337), and as he stated on cross-examination (R. 437), "a glance at this prior art shows that all of the features of 798 are present and taught in the prior art and all that it amounts to is a little shifting around of some of those features."

Another utterly simple way of arriving at the same end may be demonstrated by a minor modification of the Glencoe clamp without reference to any other art. Two changes are involved: *first*, the pivoted member and shank are inverted, and *second*, the stop lug on the pivoted member, which contacts the fixed member to position the shank for normal operation, is shifted from one side to the other. These simple changes are shown on the colored drawing, Def. Ex. 17-A, and the additional stop lug, Def. Ex. 3-A, has been actually added to the Glencoe clamp, Def. Ex. 3. Such an inversion of the pivoted member was suggested by the Patent Examiner in the Rolf (Glencoe) File Wrapper, Pl. Ex. O (R. 612), as a mere mechanical expedient not amounting to invention[3], and certainly the shifting of the stop lug from one side to the other would be of the same dignity. Is it conceivable that any skilled mechanic could not have made those changes in the ordinary course of manufacture?

We respectfully submit that the modifications of the prior art to produce 798 represent mechanical skill only and the Eighth Circuit so found in the following language (333 F.2d at 534):

> "* * * Painstaking examination of the entire record, including the testimony of the experts, convinces us that the changes in the prior art embodied in the 798 Patent involve only application of mechanical ability, and that there is no adequate evidentiary support for the trial court's finding of invention."

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3. In fact the Examiner regarded 798 as the full equivalent of Rolf (Glencoe) and 798 was overcome as a reference only because Glencoe was reduced to practice before 798's filing date (R. 613-623). Conversely, therefore, Glencoe was the full equivalent of 798 and if Glencoe had come to the Examiner's attention while 798 was pending 798 no doubt would have been rejected on Glencoe.

There is no room for reasonable doubt on that finding and we turn to the question of achievement.

Obvious Consequences

Graham does not contend that 798 would produce any difference in the *pivotal movement of the shank* or any difference in the *ground working performance of the tool* and his expert, Mr. Fenton, testified that there would be no material difference in those respects (R. 170-172). Graham does contend that the particular arrangement of 798 accomplished some *reduction in wear* and *improved flexing of the shank.* The trial court so found and upon that basis concluded that 798 would not have been obvious and was inventive (Findings XIII and XIV).

We respectfully submit that those findings are clearly erroneous and the Eighth Circuit so held

Wear Reduction

It may be conceded that 798 would eliminate two principal wear factors in the 811 clamp. (1) Fastening the shank to the pivoted member and arranging the pivot pin so that both the shank and pivoted member would pivot about the pivot pin would eliminate the rubbing wear of the shank upon the rear of the fixed member. (2) Fastening the shank to the pivoted member also would remove the pulling load from the spring rod and thereby eliminate rubbing wear on the front of the fixed member. Thus, it may be conceded that there was some improvement in wear characteristics *as compared to 811.* But the other art must be reckoned with and it will be immediately apparent that *all of those wear reductions had been fully accomplished in Glencoe.* The trial court specifically found (Finding XIV) that Glencoe uses a rotating pivot which prevents rubbing contact of the shank with

the fixed member and it is further obvious that the Glencoe fastening of the shank to the pivoted member eliminated any pulling load on the spring rod and any rubbing wear of the spring rod upon the fixed member.

In the Patent Office, Graham pointed out that 798 was further an improvement over 811 in that any vibratory action of the shank would be upon the pivoted member rather than the fixed member and that if the pivoted member should become worn it would be easier and cheaper to replace. *Precisely the same accomplishment was achieved in Glencoe.*

We submit, therefore, that while 798 may have represented an improvement in wear reduction as compared to 811, it represented no improvement in that respect over Glencoe. Furthermore, even if 798 did mark an improvement in efficiency or economy over the art, those achievements would have been as plain as the nose on your face to any skilled mechanic or even to a farmer, and surely in this modern day a mere reduction of wear, an improvement in efficiency or economy, is the product of mechanical skill only and is not sufficient to sustain a patent. This Court expressly so ruled in *Altoona Publix Theatres, Inc.* v. *American Tri-Ergon Corp.*, 294 U.S. 477, 486, 79 L. Ed. 1005, 55 S. Ct. 455 (1935), as follows:

> "The bringing together of old elements in a mechanism involving no new principle, to produce an old result, however skillfully done, even though the old result marks an advance in efficiency and utility, is but an exercise of mechanical skill and not invention."

This patent simply cannot be sustained upon the ground that it reduced wear.

Shank Flex

We come then to the one remaining feature which Graham urges, and the trial court found, as a significant achievement of 798, sufficient to sustain the patent, *i.e., improved shank flex,* and we propose to show that the patent cannot be sustained on this ground either.

At the outset, let us reduce that feature to its precise limitations. The trial court found (Finding XIV) that the Glencoe clamp "permits flexibility of the shank posteriorly to the rear of the pivoted member equal in magnitude to that which would be expected in the Graham 798 Patent structure" and it is obvious that the same thing would be true of Graham 811 and Jeoffroy SC-580. Therefore, we are concerned only with flex which might occur *in the forward end of the shank between the pivot point and the spring attachment.*

Graham's contention is that in 798 the arrangement of the shank below the plate of the pivoted member permits the forward portion of the shank to flex downwardly *away from the plate,* whereas in the prior art structures such as Rix, Cobb, Petersen, Graham 811, Jeoffroy SC-580 and Glencoe the relation of the shank to the pivoted member is such that the tendency of the shank to flex in the portion alongside the plate is *toward or against the plate* of the pivoted member and is opposed thereby. He asserts that this difference in 798 permits or produces a desirable flexing in the forward portion of the shank that is not taught by the prior art. The trial court accepted that contention and found (Findings XIII and XIV) that "an *improved functional result* is obtained by the Graham 798 structure", that "the *main improvement* is due to the particular arrangement of the shank in relation to the pivoted member and spring member which reflects in *downward flexing of the shank at the forward portion thereof alongside the plate*

portion of the pivoted member", and that "the Graham 798 structure is sufficiently different in operative relationship of the shank and pivoted member with a *slight but significant difference in the flexing of the forward portion of the shank* that is not found in the prior art, so that the Graham 798 Patent involves invention." Let us examine those findings.

The theoretical difference in the direction of shank flex relative to the plate is obvious. For simplicity of analysis, compare the Graham 811, Jeoffroy SC-580 and Glencoe prior art spring clamps with 798. In all four, there is a longitudinally extending shank and ground forces on the working tool produce an upward and rearward force which tends to rotate the shank about a pivot point. In all four, the pivot point (not necessarily the pivot pin) for the shank is *above* the shank. Therefore, as the rear portion of the shank moves *upwardly* the forward portion moves *downwardly*. The rotating force is opposed by the spring attachment at the front. Thus, because of the resistance of the spring and the fact that the shank is fastened at its forward end, there is *a tendency of the shank to bend, bow or flex downwardly in the portion between the pivot point and the point of forward attachment.* When the shank is *above* the plate, as in Graham 811, Jeoffroy SC-580 and Glencoe, it is obvious that the shank will *tend to bend downwardly TOWARD the plate* and when the shank is *below* the plate, as in 798, it is obvious that the shank will *tend to bend downwardly AWAY FROM the plate.* The experts agreed on these facts and conclusions (Fishleigh, R. 479-481, and Fenton, R. 539-544) and they are nothing but elementary physics. The theoretical difference in direction of shank flex relative to the plate member is clear and undisputed but it is and would have been obvious to anyone, whether skilled in the art or not.

This obvious theoretical difference makes no material difference in the performance of the shank.

No one has ever tested Graham's 798 for shank flex since he has never made the clamp, but Mr. Fenton tested a Jeoffroy HT-5 clamp with a three-quarter inch shank, like Pl. Ex. "C" which was held to infringe 798 in the *Jeoffroy* case. He was able to measure a downward deflection of .035 inch in the forward portion of the shank (R. 546-547) and we may assume that the 798 shank would have a similar *amount* of downward deflection. The record is clear, however, that some of the prior clamps would allow that *amount* of downward flex. Plow clamps are relatively rough castings and clearances are allowed for assembly and mounting. Examination reveals that the clearances are quite large and Mr. Fishleigh testified that there are sufficient clearances in Graham 811, Jeoffroy SC-580 and Glencoe to permit the forward portion of the shank to flex downwardly, even though the plate is underneath the shank, as much as would be expected of the 798 shank (R. 479-482). Mr. Fenton agreed as to Graham 811 and Jeoffroy SC-580 (R. 539-545). *Therefore, 798 did not change the AMOUNT of forward shank flex.*

Mr. Fenton stated that there might be some variation in the *distribution* of the flex between the fulcrum point and the point of spring attachment (R. 553-554), and he made sketches, Pl. Exs. R, S, T, U, V, and W (R. 643-653), to illustrate the possible variations that might result (R. 570-573). The net conclusion from those sketches and his testimony is that when the plate is above the shank the point of maximum flex in the forward end of the shank would be slightly farther forward from the pivot point than it would be when the plate is below. There is no proof in the record that such variations do actually occur but the theory seems sound and we therefore assume, for purposes

of argument, that the location of the plate *would make a slight difference in shank flex DISTRIBUTION.*

The proof therefore is that 798 would not change the amount of forward shank flex but it might make a slight difference in the distribution. *The record further shows conclusively, however, that whatever the direction, magnitude or distribution of flex in the forward portion of the shank may be, it is unimportant to the operation.*

Mr. Fishleigh testified that the long curved rearwardly extending portion of the shank is designed for large ranges of flexion and that in actual operation there is a great deal of flex in that part of the shank, but that in the forward portion of the shank, alongside the plate member, the range of flexion is extremely small, only a few thousandths of an inch at most, and that *such flexion is of no consequence to the operation* (R. 364, 479). The testimony of Mr. Fenton likewise minimizes the importance thereof (R. 548):

> "Q. Do you regard the small degree of flex in the forward end of the shank that lies between the pivot point and the point of spring attachment to be of any significance or any importance to the functioning of a device such as 798?
> "A. Unless you are approaching the elastic limit, I think this flexing will reduce the maximum stress at the point of pivot there, where the maximum stress does occur. I think it will reduce that. I don't know how much.
> "Q. Do you think it is a substantial factor, a factor of importance in the functioning of the structure?
> "A. Not a great factor, no."

Similar testimony was given by him in the *Jeoffroy* case and pointed out in this case (R. 548-549), as follows:

"Q. * * * Do you consider this portion, this what you call the resilient action of the shank, Mr. Fenton, in the forward 8 or 9 inches of that shank that's up inside the mounting or bracket, important to the function of the device?

"A. Not too important. It is present, but not too important.

"Q. It would function just as well whether that were there or not, wouldn't it?

"A. In this particular case in this device?

"Q. Yes, sir.

"A. I think it would essentially, yes."

There is not one line of evidence in this record that there was any problem of shank breakage or bending with the Graham 811, Jeoffroy SC-580 or Glencoe clamps, and there is no evidence that shank performance was improved in any way by the 798 clamp.[4]

We respectfully submit that the trial court's finding of an improved functional result obtained by a "*significant difference* in the flexing of the forward portion of the shank" is wholly unsupported by the record and is contrary to the testimony of both of the experts. *It is clearly erroneous and the Court of Appeals for the Eighth Circuit so ruled.*

Undisclosed and Unclaimed Function

Assuming, however, for purposes of argument that the slight difference in forward shank flex distribution and relative direction is significant and important to the operation and could be called a new or unobvious function or conse-

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4. It is interesting to note that in the *Jeoffroy* case, 219 F.2d at 518, the Fifth Circuit said 798 was inventive because it permitted "some of that same advantageous flexibility inherent in the old 811 structure". Apparently the Fifth Circuit thought that 798 was less flexible than 811.

quence, we submit that *it cannot support the patent because it is foreign to its teachings and contrary to its claims.*[5]

There is not one word about it in the specifications; it is not mentioned in the twelve original claims; it is not mentioned in the two allowed claims; it is not mentioned in the Patent Office proceedings where great emphasis was placed on wear reduction and distinction of structural detail from the prior art; and it is not shown in the drawings. We direct the Court's attention particularly to Figure 6 of the drawings showing the device in a pivoted position where maximum shank flex would occur, but *the shank lies in a straight line along the full length of the plate member with no showing of any flex away from the plate member at any point.* (Compare the sketch, Pl. Ex. P (R. 647), made by Mr. Fenton during the trial, wherein he sought to show the theoretical flex by the dotted lines in the 798 shank.)

Not only did Graham fail to disclose, mention or claim the shank flex in the patent or the Patent Office proceedings, it is evident, as Mr. Fishleigh pointed out (R. 478-479), that *any flexing of the shank away from the plate of the pivoted member would be in direct conflict* with Claim 1 which specifies:

> "means connecting the elongated plate portion with the shank for maintaining the upperface of the shank in *constant continuous contact* with the underface of said plate portion of the shank attaching member" (Emphasis added.)

and with Claim 2 which specifies:

> "a bolt connecting the forward end of the plate portion with the forward end of the shank and cooperating with the shank embracing means in maintaining the upper-

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5. At this point we respectfully direct the Court's attention again to the Patent Office history at pages 18-21, *supra.*

face of the shank in *constant continuous contact* with the underface of said plate portion." (Emphasis added.)

Graham, of course, now contends that the claims do not specify that the shank is in constant continuous contact with the plate *along its entire length* and that if it remains in contact at any point it satisfies the claims. In the Patent Office, however, one point Graham emphasized (R. 692) was that the two new claims distinguish from the cited art

> "by bringing out means connecting the elongated plate portion with the shank for maintaining the *upperface* of the shank in *constant continuous contact* with the *underface* of the plate portion of the fixed member." (Emphasis added.)

The drawings show continuous contact throughout the entire length during all phases of operation and we think that is the fair meaning of the claim language in view of all the attendant circumstances. In fact, if the shank were bolted to the plate at several places so as to eliminate any possible flex the claims would still apply because flex is not claimed.

Section 112 of the Patent Act (35 U.S.C., § 112) provides:

> "The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
>
> "An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof."

If the shank flex function is really important, Graham was clearly authorized by the statute to claim the means for achieving that function, and if it is the real heart of the invention, as he now asserts, he was required to disclose and claim a structure which would perform the function—not one which is exactly the opposite. He claimed in detail the longitudinally extending faces and the relationship of the fixed member, pivoted member, shank and shank fastening means and he emphasized to the Examiners how wear was reduced and repair facilitated thereby, *but he did not at any time or in any way suggest the shank flex which he now asserts as the thread of life for this patent.*

We submit that Graham's whole shank-flex argument is an afterthought, wholly foreign and contrary to the patent teachings and claims, which should be rejected just as the Eighth Circuit did, and just as this Court rejected a similar argument in *Lincoln Engineering Co.* v. *Stewart-Warner Corp.*, 303 U.S. 545, 550, 83 L. Ed. 1008, 58 S. Ct. 662 (1937), in the following language:

> "* * * the respondent * * * urges that in the combination of the Butler patent, the headed nipple performs a new and different function from that which it had heretofore performed, in other combinations, in that, when the coupler is withdrawn from the nipple, at the end of the greasing operation, the rounded head of the nipple 'cocks' the jaws of the coupler for the next operation. *The suggestion seems to be an afterthought. No such function of the nipple is hinted at in the specifications of the patent. If this were so vital an element in the functioning of the apparatus it is strange that all mention of it was omitted.*" (Emphasis added.)

Paraphrasing this Court's language, if forward shank flex were so vital an element in the functioning of the 798 structure, it is strange indeed that all mention of it was omitted until the patent reached the courthouse. *It cannot in good conscience support this patent.*

Presumption of Validity

Of course a patent is presumed to be valid. For many years that was so by reason of judicial decision and now the statute, 35 U.S.C., § 282, so provides. The presumption is rebuttable, however, and when substantial evidence attacking the validity of a patent is introduced the question of patentability is for the Court.

The presumption is based in part upon the assumption that the Patent Office routinely considers the pertinent prior art before a patent is issued. Thus, when it appears that pertinent art was not considered there is no reason for indulging the presumption and it is of little consequence. The courts so hold. In *Jacuzzi Bros.* v. *Berkeley Pump Co.*, 191 F.2d 632, 634 (9th Cir. 1951), the Court said:

> "* * * Even one prior art reference, which has not been considered by the Patent Office, may overthrow the presumption of validity, and, when the most pertinent art has not been brought to the attention of the administrative body, the presumption is largely dissipated. Such is the case here."

To the same effect are *L. S. Donaldson Co.* v. *LaMaur, Inc.*, 299 F.2d 412, 420 (8th Cir. 1962); *Day-Bright Lighting, Inc.* v. *Sandee Mfg. Co.*, 286 F.2d 596, 597 (7th Cir. 1960); *O'Leary* v. *Liggett Drug Co.*, 150 F.2d 656, 664 (6th Cir. 1945); *Cornell* v. *Adams Engineering Co.*, 258 F.2d 874, 875 (5th Cir. 1958); *Elliott & Co.* v. *Youngstown Mfg. Co.*, 181 Fed. 345, 349 (3rd Cir. 1910); *R. Hoe & Co.* v. *Goss Printing Press Co.*, 30 F.2d 271, 274 (2nd Cir. 1929).

Graham urges and the trial court found (Finding XI) that the presumption of validity was not overcome by Deere because the additional art relied upon, particularly Rix and Glencoe, is similar to some of the art relied upon by the Examiner, for example, Petersen. It seems com-

pletely clear however that Glencoe is in fact closer to 798 than any art cited by the Examiner and Graham's own expert definitely considered Glencoe more pertinent than Petersen. He testified, both on direct and cross-examination, that Glencoe has all of the elements of 798 and that the only real difference is in the shank position (R. 530, 560-563), but he classified Petersen along with the "antique art" of harrows and light cultivators, wherein the forces on the pivoted member are generally transverse rather than longitudinal (R. 522 and 527).

It would serve no useful purpose to further review the art which has been fully considered heretofore and we simply submit that both Rix and Glencoe, particularly Glencoe, are pertinent references which were not considered by the Patent Office and the presumption of validity is therefore weakened.

The presumption is not merely weakened by a technical rule, however, it is conclusively overcome by the abundant proof of the whole record, and the Eighth Circuit so held.

Deere's Clamps and Conduct

Graham asserts (Brief 32-36, 41 and 42) that Deere coveted, copied, pirated and stole the 798 structure and that Deere's infringement is proof of 798's validity.

The issue of infringement is not before this Court and all of Graham's argument about the Deere clamps and Deere's conduct is relatively immaterial to the question of validity, but a brief response seems proper.

Deere is an old and honored company in the farm implement industry. It dates from the first all steel plow of 1837 which can be viewed in the Smithsonian Institute, and a search of the federal cases for over 100 years will reveal an

extreme dearth of infringement charges against Deere (or John Deere).

Deere produced its complete file of correspondence and memoranda pertaining to the development of its two spring clamps (Def. Ex. 32, R. 844-876) as well as its preliminary and final drawings (Def. Exs. 33 through 46, R. 877-899), and it is completely clear therefrom that Deere made a careful effort to avoid infringement of 798 before it released any clamp for production. Deere carefully studied the patent and the File Wrapper and it carefully designed its clamps to avoid the teachings and claims of the 798 patent. It was entitled to rely upon the patent and the File Wrapper as disclosing the full scope of Graham's claimed invention and one thing is clear beyond all doubt—Deere could have searched the patent and the File Wrapper until "Doomsday" and it could never have found an intimation of the superior shank flex which Graham now urges as the heart of his advance, the superior advantage which Graham says Deere coveted and stole.

Furthermore, when Deere's clamps were tested by Mr. Fishleigh to determine whether the alleged shank flex would occur it was found to be virtually nonexistent (R. 503-506).

Graham argues that Deere's own design engineer, Mr. Hunter, recognized the superior achievement of 798 and he quotes Mr. Hunter's testimony at R. 113, but that testimony shows on its face that all Mr. Hunter was saying was that with the shank below the hinge member, rather than above, there is some advantage in that the shank forces transmitted into the other members of the clamp are compressive forces rather than tensile forces. His testimony certainly cannot be construed as recognizing any superior flexing of the shank.

Graham's whole argument of piracy is based upon the assumption that the Deere clamps do infringe. That issue was not resolved by the Eighth Circuit; it is not before this Court; the major premise of the copying argument is therefore absent and no conclusion can be drawn therefrom. The whole argument should be disregarded.

Validity Crutches

Frequently courts rely upon such things as long-felt need, failure of others, difficulty of achievement, sudden displacement of existing devices, commercial success, and immediate copying as indicative of invention, but those considerations are merely makeweights. They are no substitute for probing analysis and they deserve consideration only when invention is truly in doubt. *Toledo Pressed Steel Co.* v. *Standard Parts, Inc.*, 307 U.S. 350, 356, 83 L. Ed. 1334, 59 S. Ct. 897 (1939); *Jungersen* v. *Ostby & Martin Co.*, 335 U.S. 560, 567, 93 L. Ed. 235, 69 S. Ct. 269 (1949); *Great A. & P. Tea Co.* v. *Supermarket Equipment Corp.*, 340 U.S. 147, 153, 95 L. Ed. 162, 71 S. Ct. 127 (1950). The crutches cannot avail here, even if invention were in doubt, because *the crutches do not exist.* There is no evidence of long-felt need—the 798 clamp was quickly designed when the desire arose. There is no evidence of failure by others—in fact Jeoffroy HT-5 was on the market nearly a year before the patent issued. The only commercial success achieved was by Jeoffroy. Other clamps were not displaced—Graham continued with 811; Glencoe remained unchanged, and Cockshutt did not infringe. Finally, there is no evidence of copying by anybody.

Summation of Validity

Under this record the conclusion is inescapable that 798 represents mechanical skill only. The structural mod-

ifications were plainly indicated by the art and would have been obvious to one having ordinary skill in the art. The elements as combined performed in a predictable and expected manner and there was no new, surprising or unexpected result, function or consequence. In short, the subject matter as a whole would have been obvious to one having ordinary skill in the art and the Court of Appeals for the Eighth Circuit correctly so ruled.

As this Court said long ago, in *Atlantic Works* v. *Brady*, 107 U.S. 192, 200, 27 L. Ed. 438, 2 S. Ct. 225 (1882), and as it has reiterated many times over:

> "The design of the patent laws is to reward those who make some substantial discovery or invention which adds to our knowledge and makes a step in advance in the useful arts. Such inventors are worthy of all favor. It was never the object of those laws to grant a monopoly for every trifling device, every shadow of a shade of an idea, which would naturally and spontaneously occur to any skilled mechanic or operator in the ordinary progress of manufacture. Such an indiscriminate creation of exclusive privileges tends rather to obstruct than to stimulate invention. It creates a class of speculative schemers who make it their business to watch the advancing wave of improvement, and to gather its foam in the form of patented monopolies, which enable them to lay a heavy tax upon the industry of the country, without contributing anything to the real advancement of the art. It embarrasses the honest pursuit of business with fears and apprehensions of concealed liens and unknown liabilities to law suits and vexatious accountings for profits made in good faith."

No better language could be used to characterize 798. It contributed absolutely nothing to the art, nothing for the benefit of the public. It has been used only as an implement of litigation against Jeoffroy, Cockshutt and now

Deere in an effort to suppress competition, expand unwarrantedly the bounds of monopoly, and diminish the resources available to the public. The issuance of the patent was contrary to the Constitution, the statutes and the judicial rules. It is not entitled to survive and the judgment of the Eighth Circuit should be affirmed.

POINT II.

Section 103 Did Not Materially Change the Standards of "Invention" or "Patentability" Established by This Court and the Court of Appeals for the Eighth Circuit Applied Correct Standards.

The foundation of our patent system is Article I, Section 8, Clause 8 of the Constitution, which provides that Congress shall have the power

> "To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries; * * *."

The limited monopolies thus authorized are not given as personal favors, but solely to promote the progress of science and useful arts, and in all cases pertaining thereto the Constitutional purpose, the public interest, is paramount. *Sears, Roebuck & Co.* v. *Stiffel Co.*, 376 U.S. 225, 11 L. Ed. 661, 84 S. Ct. 784 (1964); *Great Atlantic & Pacific Tea Co.* v. *Supermarket Equipment Corp.*, 340 U.S. 147, 95 L. Ed. 162, 71 S. Ct. 127 (1950); *Sinclair & Carroll Co.* v. *Inter-Chemical Corp.*, 325 U.S. 327, 89 L. Ed. 1644, 65 S. Ct. 1143 (1945); *Cuno Engineering Corp.* v. *Automatic Devices Corp.*, 314 U.S. 84, 86 L. Ed. 58, 62 S. Ct. 37 (1941); *Atlantic Works* v. *Brady*, 107 U.S. 192, 27 L. Ed. 438, 2 S. Ct. 225 (1883); *Kendall* v. *Winsor*, 62 U.S. 322, 16 L. Ed. 165 (1859).

Everyone recognizes the "socio-economic" importance of a healthy patent system but there are rather extreme variations in attitude as to what is a healthy system and it has required the eternal vigil of this Court to protect the public interest against the incessant onslaught of those who have sought private gain at public expense.

Judicially Established Standards

It is uniformly agreed that prior to 1952 the only statutory conditions for patentability (aside from the requirements of the application, etc.) expressly enumerated by Congress were *novelty* and *utility*, but at least since *Hotchkiss* v. *Greenwood*, 52 U.S. (11 How.) 248, 13 L. Ed. 683 (1850), this Court has held that novelty and utility alone are not enough to sustain a patent, that if the Constitutional purpose is to be served there must be something more to justify the grant of a statutory monopoly. That something more, consistently required, has been "invention" or "discovery".

But what is "invention" or "discovery"? The statutes prior to 1952 did not attempt to define and it was necessary for this Court to establish a test.

Apparently the first attempt was *Hotchkiss* v. *Greenwood, supra*, in which Mr. Justice Nelson said:

> "* * * unless more ingenuity and skill * * * were required * * * than were possessed by an ordinary mechanic acquainted with the business, there was an absence of that degree of skill and ingenuity which constitute essential elements of every invention. In other words, the improvement is the work of the skillful mechanic, not that of the inventor."

This statement was repeated and paraphrased in many cases and in course of time the "expected skill of the art" became the basic test.

The critics, including Graham and most of the *amicus curiae*, assert, however, that some time prior to 1952 this Court developed a "passion for overturning patents", departed from the *Hotchkiss* rule and laid down more exacting "standards of invention" not required or authorized by the statutes or the Constitution. *This charge is unfounded.* While there have been some variations in phraseology, this Court has consistently applied the basic test of *Hotchkiss* that "invention" requires "an advance in the art somewhat beyond the expected skill of the art".

To demonstrate, let us review a few of the cases, and since the case at bar involves a "combination" patent, we will limit our review to cases of that nature.

In *Reckendorfer* v. *Faber*, 92 U.S. (2 Otto.) 347, 23 L. Ed. 719 (1876), the patentee attached a rubber eraser to a lead pencil and claimed the combination. In holding the patent invalid, the Court said:

> "* * * An instrument or manufacture which is the result of *mechanical skill* merely is not patentable. *Mechanical skill is one thing; invention is a different thing.* Perfection of workmanship, however much it may increase the convenience, extend the use, or diminish expense, is not patentable. *The distinction between mechanical skill, with its conveniences and advantages, and inventive genius, is recognized in all the cases.*" (Emphasis added.)

In *Atlantic Works* v. *Brady*, 107 U.S. 192, 27 L. Ed. 438, 2 S. Ct. 225 (1883), the patentee installed flood tanks and front mounted screws on a dredgeboat and claimed the combination. In holding the patent invalid for lack of invention, Mr. Justice Bradley said:

"The process of development in manufacturers creates a constant demand for new appliances, which *the skill of ordinary head workmen and engineers* is generally adequate to devise, and which, indeed, are the natural and proper outgrowth of such development. Each step forward prepares the way for the next, and each is usually taken by spontaneous trials and attempts in a hundred different places. To grant to a single party a monopoly of every slight advance made, *except where the exercise of invention, somewhat above ordinary mechanical or engineering skill, is distinctly shown,* is unjust in principle and injurious in its consequences.

"The design of the patent laws is to reward those who make some substantial discovery or invention, which adds to our knowledge and makes a step in advance of the useful arts. Such inventors are worthy of all favors. It was never the object of those laws to grant a monopoly for every trifling device, every shadow of a shade of an idea, which would naturally and spontaneously occur to *any skilled mechanic or operator* in the ordinary progress of manufacturers.

"* * * What, then, did he invent? *Did he make a selection and combination of these elements that would not have occurred to any ordinary skilled engineer called upon, with all this previous knowledge and experience before him,* to devise the construction of a strong dredge-boat for use at the mouth of the Mississippi? We think not. We think that there is no reasonable ground for any such pretention." (Emphasis added.)

In *Concrete Appliances Co.* v. *Gomery,* 269 U.S. 177, 70 L. Ed. 222, 46 S. Ct. 42 (1925), the patent was for a rather complicated apparatus for transferring concrete or other plastic materials from a suitable source of supply to working points on a building or other structure in the course of construction. Commencing at page 179 Mr. Justice Stone said:

"The several elements in the petitioner's claims which we have enumerated embrace familiar devices long in common use, separately or in smaller groups, both in this and in kindred mechanical arts. It is not argued that there is any novelty in such units or groups and the only serious question presented is whether, in combination in the apparatus described, they constitute an invention. That the combination embodied in the described apparatus produces a useful result in the mechanical arts and in modified form is widely used in building operations is established. Our inquiry therefore must be addressed to the question *whether the combination* is novel and whether it *passes the line sometimes tenuous and difficult of ascertainment which separates mechanical skill from invention.* The pursuit of this inquiry involves a consideration of the state of the art prior to Callahan's application, of which elaborate proof was made in the trial court."

Continuing at page 185:

"* * * The adaptation independently made by engineers and builders of these familiar appliances to the movement and distribution of wet concrete in building operations and the independent patent applications, within a comparatively short space of time, for devices for that purpose are in themselves persuasive evidence that this use in combination of well known mechanical elements *was the product only of ordinary mechanical or engineering skill and not of inventive genius.* Atlantic Works v. Brady * * *. It is but 'the suggestion of that common experience, which arose spontaneously and by a necessity of human reasoning, in the minds of those who had become acquainted with the circumstances with which they had to deal.' * * * This progressive adaptation, much of which preceded and some of which was co-temporaneous with the Callahan adaptation, of well known devices to new but similar uses, *'is but the display of the expected skill of the calling, and involves only the exercise of the ordinary faculties of reasoning upon the material supplied by a*

special knowledge, and the facility of manipulation which results from its habitual and intelligent practice.' * * * No novel elements were used by Callahan in his device. *We are unable to find that their use in combination was more than the application to them of mechanical skill in the course of mutual development and expansion of the art.* The decree of the court below is affirmed." (Emphasis added).

Ten years later, Mr. Justice Stone again spoke for the Court in *Altoona Publix Theatres* v. *American Tri-Ergon Corporation,* 294 U.S. 477, 79 L. Ed. 1005, 55 S. Ct. 455 (1935). The patent claims in issue related to a device for securing uniformity of speed in machines used for recording and reproducing talking motion pictures and are referred to as the "flywheel claims." In holding those claims invalid for lack of invention the Court said, at page 486:

"An improvement to an apparatus or method, to be patentable, must be *the result of invention, and not the mere exercise of the skill of the calling or an advance plainly indicated by the prior art.* * * * The inclusion of a flywheel in any form of mechanism to secure uniformity of its motion has so long been standard procedure in the field of mechanics and machine design that the use of it in the manner claimed by the present patent *involved no more than the skill of the calling.* * * * Patents for devices for use both in the motion picture art and in the art of sound reproduction, * * *, plainly foreshadowed the use made of the flywheel in the present patent, if they did not anticipate it. The patentees brought together old elements, in a mechanism involving no new principle, to produce an old result, greater uniformity of motion. However skillfully this was done, and even though there was produced a machine of greater precision and a higher degree of motion-constancy, and hence one more useful in the art, *it was still the product of skill, not of invention.*" (Emphasis added).

None of the critics have stated just when it was that this Court acquired its "passion against patents", departed from *Hotchkiss* v. *Greenwood,* and started applying new, stricter and unwarranted standards of invention. Some have intimated twenty to twenty-five years before the 1952 Act. *Altoona* certainly falls within that period and *we see no change of standard.* Perhaps we are a little early, however, so consider *Toledo Pressed Steel Co.* v. *Standard Parts, Inc.,* 307 U.S. 350, 83 L. Ed. 1334, 59 S. Ct. 897 (1939), a case which surely must fall within the "passion" period. The patent covered a burner for use in outdoor warning signals such as construction torches and truck flares. Mr. Justice Butler wrote the opinion and construed the claims at page 353 as follows:

> "* * * Considered together, unobscured by artificiality in their statement, it fairly may be said that they (the claims) show that all that the patentees did was to put over the wick of a torch, well known in the art, an inverted metal cup-like cap having holes in its sides, some to let in air for combustion and others to let out flame. The cap was also well known and had been used as a part of other devices for the protection of kerosene and other flames."

Holding the patent invalid for lack of invention, he said at page 355:

> "The torch body was old in the art to which it belonged. The cap, as part of devices used in other fields, was old and useful to prevent extinguishment of flames by wind or rain and to permit flames to extend through holes to the open air. The problem patentees set for themselves was to prevent extinguishment while preserving usefulness of the flames as warning signals. They solved it by merely bringing together the torch and cap. As before, the torch continued to produce a luminescent, undulating flame, and the cap continued to let in air for combustion, to protect the flame from wind

> and rain and to allow it to emerge as a warning signal. They performed no joint function. Each served as separately it had done. The patented device resulted from mere aggregation of two old elements and not from invention or discovery. * * * On the records before us, *it is impossible to hold that production of the patented device required more than mechanical skill and originality attributable to those familiar with the art of protecting flames of kerosene and other burners.*" (Emphasis added).

Clearly the test was still "the skill of the art."

Then came *Cuno Engineering Corp.* v. *Automatic Devices Corp.*, 314 U.S. 84, 86 L. Ed. 58, 62 S. Ct. 37 (1941), which undoubtedly has received more of the barb of criticism than any other case. The patent was for an automatic cigar or cigarette lighter for use principally in automobiles. Claim 2, which is typical, provided:

> "In a device of the class described, a removable heating member having an electrical heating unit, a socket for receiving and holding said heating member, electrical current supply terminals, means for removing said heating member to a position for establishing an energizing circuit to said heating unit, and means responsive to the temperature of said heating unit for interrupting said energizing circuit."

At the outset, page 88, the Court said:

> "* * * It is our opinion that the Mead device was not the result of invention but a *'mere exercise of the skill of the calling,' an advance 'plainly indicated by the prior art.'* "

After reviewing the art and concluding that the accomplishment of the Mead device was to incorporate a thermostatic control in a wireless or cordless lighter, the Court said, commencing at page 89:

"To incorporate such a thermostatic control in a so-called 'wireless' or 'cordless' lighter *was not to make an 'invention' or 'discovery' within the meaning of the patent laws.* As we have shown, both the thermostatically controlled heating unit and the lighter with a removable plug bearing the heating unit were disclosed by the prior art. *More must be done than to utilize the skill of the art in bringing old tools into new combinations.* * * * Respondent, however, contends that wholly new functions were involved in Mead's conception, viz., relieving the operator of the necessity of manually holding the plug in closed-circuit position, and automatically and permanently opening the circuit when the heating coil was at the temperature predetermined for its proper use. And respondent argues, Mead's new combination had an entirely different mode of operation from any 'wireless' lighter then in existence and from any thermostatically controlled electric device.

"We may concede that the functions performed by Mead's combination were new and useful. But that does not necessarily make the device patentable. Under the statute (35 U.S.C.A., § 31, R.S. § 4886) the device must not only be 'new and useful,' it must also be an 'invention' or 'discovery.' * * * Since *Hotchkiss* v. *Greenwood,* 11 How. (U.S.) 248, 267, 13 L. Ed. 683, 691 decided in 1851, *it has been recognized that if an improvement is to obtain the privileged position of a patent more ingenuity must be involved than the work of a mechanic skilled in the art.* * * * 'Perfection of workmanship, however much it may increase the convenience, extend the use, or diminish expense, is not patentable.' * * * The principle of the Hotchkiss case applies to the adaption or combination of old or well known devices for new uses * * * *That is to say the new device, however useful it may be, must reveal the FLASH OF CREATIVE GENIUS not merely the skill of the calling.* If it fails, it has not established its right to a private grant on the public domain.

"Tested by that principle Mead's device was not patentable. *We cannot conclude that his skill in making this contribution reached the level of inventive genius which the Constitution* (Art. 1, § 8) *authorizes Congress to reward.* He merely incorporated the well-known thermostat into the old 'wireless' lighter to produce a more efficient, useful, and convenient article. * * * A new application of an old device may not be patented if the 'result claimed as new is the same in character as the original result' * * * even though the new result had not before been contemplated. * * * Certainly the use of a thermostat to break a circuit in a 'wireless' cigar lighter is analogous to or the same in character as the use of such a device in electric heaters, toasters or irons, whatever may be the difference in detail of design. *Ingenuity was required to effect the adaptation, but no more than that to be expected of a mechanic skilled in the art.*

"Strict application of that test is necessary lest in the constant demand for new appliances the heavy hand of tribute be laid on each slight technological advance in an art. * * *

"Such considerations prevent any relaxation of the rule of the Hotchkiss case as respondent would seem to desire." (Emphasis added).

In the course of the opinion, Mr. Justice Douglas coined a phrase "FLASH OF CREATIVE GENIUS" and the critics would have us believe that the Court thereby established a new test which would require that the inventor leap from bed in the middle of the night with his concept suddenly born and shouting, "Eureka! Eureka!" *The case is not subject to any such interpretation.* The Court did not lay down any new test; it merely reasserted in picturesque language the established test and again forcefully and sternly stated that if the patent system is to survive, if the Constitutional purpose is to be carried out, there must be no

relaxation of the rule, the *Hotchkiss* rule if you please, that a valid patent must mark an advance beyond the expected skill of the art.

It is no doubt true that during the period from about 1930 to 1950 many more patents were voided than in prior years, both by this Court and by the lower courts; however, we submit that it was not because of a new test or standard of invention, but rather because of a firmer insistence upon compliance with the established standard. And, that is not at all surprising in view of the tremendous flood of patent applications and patents in recent years. For example in the 43 years from 1793 to 1836 only about 10,000 patents were issued but by 1936 they were pouring out of the Patent Office at a rate in excess of 3,000 per month. (Journal of the Patent Office Society, Centennial Number, "History of the Patent Office," July 1936, Vol. 18, P. 230). Of course, recent years have seen industrial development on a grand scale, but it is highly doubtful that the number of inventions has increased in the indicated proportion. In fact patent litigation of recent years shows beyond any doubt that there had developed in the Patent Bar and in the Patent Office a loose approach to patentability which had lost sight of the Constitutional purpose, with a resulting grant of patent monopolies upon a host of trivial devices, products and processes that marked no true advance and were not entitled to a privileged position. Makeweights, such as commercial success, were substituted for the true test of invention and the appalling result of a relaxed standard, predicted by Mr. Justice Bradley in *Atlantic Works* v. *Brady,* was fullborn. *It was imperative therefore, that this Court, the final guardian of the public interest, refocus attention upon the Constitutional purpose and reaffirm the minimum standard.* It did so in *Cuno.*

Then came *Great Atlantic & Pacific Tea Co.* v. *Supermarket Equipment Corp.*, 340 U.S. 147, 95 L. Ed. 162, 71 S. Ct. 127 (1950), the last decision by this Court on patentability. The patent covered a combination for a cashier's counter equipped with a three-sided frame, or rack, with no top or bottom, kept on the counter by guides, which, when pushed or pulled would move groceries deposited within it by a customer to the checking clerk and leave them there when pushed back to repeat the operation. Both courts below held the patent valid and this Court reversed for lack of invention. Beginning at page 150 the Court, through Mr. Justice Jackson,[6] said:

> *"What indicia of invention should the courts seek in a case where nothing tangible is new, and invention, if it exists at all, is only in bringing old elements together?*
>
> "While this court has sustained combination patents, it never has ventured to give a precise and comprehensive definition of a test to be applied in such cases. The voluminous literature which the subject has excited discloses no such test. It is agreed that the key to patentability of a mechanical device that brings old factors into cooperation *is presence or lack of invention.* In course of time the profession came to employ the term 'combination' to imply its presence and the term 'aggregation' to signify its absence, thus making antonyms in legal art of words which in ordi-

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6. The critics of this Court point with glee to the remarks of Mr. Justice Jackson in his dissent in *Jungersen* v. *Ostby and Barton Co.*, 335 U.S. 560, 572, 93 L. Ed. 235, 69 S. Ct. 269 (1949), as follows:

> "* * * I doubt that the remedy for such Patent Office passion for granting patents is an equally strong passion in this Court for striking it down so that the only patent that is valid is one this Court has not been able to get its hands on."

They should note also that he wrote for a unanimous Court in *A. & P.*

nary speech are more nearly synonyms. However useful as words of art to denote in short form than an assembly of units has failed or has met the examination for invention, their employment as tests to determine invention results in nothing but confusion. *The concept of invention is inherently elusive when applied to combinations of old elements.* This, together with the imprecision of our language, have counseled courts and abstracters to be cautious in affirmative definitions of rules on the subject.

"The negative rule accrued from many litigations was condensed about as precisely as the subject permits in Lincoln Engineering Co. v. Stewart-Warner Corp., 303 U.S. 545, 549, 82 L. Ed. 1008, 1010, 58 S. Ct. 662: 'The mere aggregation of a number of old parts or elements which, in the aggregation, perform or produce *no new or different function or operation* than that theretofore performed or produced by them, is not patentable invention.' To the same end is Toledo Pressed Steel Co. v. Standard Parts, Inc., 307 U.S. 350, 83 L. Ed. 1334, 59 S. Ct. 897, and Cuno Engineering Corp. v. Automatic Devices Corp., 314 U.S. 84, 86 L. Ed. 58, 62 S. Ct. 37. *The conjunction or concert of known elements must contribute something; only when the whole in some way exceeds the sum of its parts is the accumulalation of old devices patentable.* Elements may, of course, especially in chemistry or electronics, take on some new quality or function from being brought into concert, but this is not a usual result of uniting elements old in mechanics. *The case is wanting in any UNUSUAL OR SURPRISING CONSEQUENCES from the unification of the elements here concerned, and there is nothing to indicate that the lower courts scrutinized the claims in the light of this rather severe test.*

"Neither court below has made any finding that old elements which made up this device perform any *additional or different function* in the combination than they perform out of it. This counter does what a store counter always has done—it supports merchan-

dise at a convenient height while the customer makes his purchases and the merchant his sales. The three sided rack will draw or push goods put within it from one place to another—just what any such a rack would do on any smooth surface—and the guide rails keep it from falling or sliding off from the counter, as guide rails have ever done. Two and two have been added together, and still they make only four.

"Courts should scrutinize combination patent claims with a care proportioned to the difficulty and improbability of finding invention in an assembly of old elements. The function of a patent is to add to the sum of useful knowledge. Patents cannot be sustained, when on the contrary, their effect is to subtract from former resources freely available to skilled artisans. *A patent for a combination which only unites old elements with no change in their respective functions, such as is presented here, obviously withdraws what already is known into the field of its monopoly and diminishes the resources available to skillful men.* This patentee has added nothing to the total stock of knowledge, but has merely brought together segments of prior art and claims them in congregation as a monopoly.

"The Court of Appeals and the respondent both lean heavily on evidence that this device filled a long felt want and has enjoyed commercial success. But commercial success without invention will not make patentability. Toledo Pressed Steel Co. v. Standard Parts, Inc., (U.S.) supra. The courts below concurred in finding that every element here claimed (except extension of the counter) was known to prior art. When, for the first time, those elements were put to work for the supermarket type of stores, although each performed the same mechanical function for them that it had been known to perform, they produced results more striking, perhaps, than in any previous utilization. To bring these devices together and apply them to save the time of a customer and checker was a good idea,

but scores of progressive ideas in business are not patentable, and we conclude on the findings below that this one was not.

"* * * The defect that we find in this judgment is that *a standard of invention appears to have been used that is less exacting than that required where a combination is made up entirely of old components.* It is on this ground that the judgment below is reversed." (Emphasis added).

What is the effect of *A&P*? Did this Court finally abandon *Hotchkiss* v. *Greenwood* and the long line of cases reaffirming that rule? Did this Court abandon the basic test of invention requiring an advance beyond the expected skill of the art? We submit that *IT DID NOT*. The basic test was fully retained and the Court merely stated more specifically some guideposts for determining when a combination of old elements represents an advance beyond the expected skill of the art.

Old mechanical elements are the tools with which ordinary engineers and mechanics regularly work. It is obvious, predictable and expected that in the normal course of their work they will select, reform and assemble old elements for hundreds of different purposes as the need arises *because that is their business.* It is expected and predictable that in so doing they will make improvements, reduce wear, increase efficiency and economy, extend use, apply old devices to new uses, and make better, more useful and successful devices *because that is their business.* All such things are within the expected skill of the calling; they are obvious, non-inventive and unpatentable.

Occasionally, however, an assembly of old elements may produce an unusual, unexpected, unobvious and surprising consequence. Then, and only then, is it inventive and patentable. The surprising consequence may be a

wholly new result or ultimate function; it may be a new or different function of a single element, or it may be a new or different combined function of several elements. The key is the "unexpected", the "surprising", the "unobvious" consequence which results from the combination. If there is such a consequence, the skill of the art has been exceeded; the art has been advanced and there is invention.

This is what *A.&P.* stands for and it is entirely consistent with *Hotchkiss*. *A&P* was merely an application of the basic standard of invention to the narrow and specific problem of combination patents.

Such was the state of the law when the Patent Act of 1952 was adopted, so let us see what the statute did to it.

Section 103 and Its Effect

In Section 103 Congress for the first time expressly enumerated conditions for patentability in addition to novelty and utility, to wit:

"§ 103. Conditions for Patentability;

Non-Obvious Subject Matter.

A patent may not be obtained though the invention is not identically disclosed or described as set forth in Section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made." (July 19, 1952 c. 950, § 1, 66 Stat. 798, 35 U.S. C. § 103.)

What does this new section mean?

The First Sentence

On its face *the first sentence* is nothing more than a paraphrase of the basic test of invention which this Court had consistently applied. It is not in the precise language of any single case but it is unquestionably a substantial paraphrase of the language of many cases.

This view is fully confirmed by both the Senate and House Reports, S. Rep. No. 1979, 82nd Cong., 2nd Sess. (1952), and H.R. Rep. No. 1923, 82nd Cong., 2nd Sess. (1952), as follows:

> "Section 103, for the first time in our statute, provides *a condition that exists in the law and has existed for more than 100 years, but only by reason of decisions of the courts.* An invention which has been made, and which is new in the sense that the same thing has not been made before, may still not be patentable if the difference between the new thing and what was known before is not considered sufficiently great to warrant a patent. *That has been expressed in a large variety of ways in decisions of the courts* and in writings. Section 103 states this requirement in the title. It refers to the difference between the subject matter sought to be patented and the prior art, meaning what was known before as described in Section 102. If the difference is such that the subject matter as a whole would have been *obvious at the time to a person skilled in the art,* then the subject matter cannot be patented.
>
> "That provision *paraphrases language which has often been used in decisions of the courts,* and the section is added to the statute for uniformity and definiteness. This section should have a stabilizing effect and minimize great departures which have appeared in some cases." (Emphasis added).

A majority of the circuit courts have expressly held that the first sentence did not establish any new test but

merely codified a hundred years of decisional patent law, including *Cuno* and *A&P*. *Stanley Works* v. *Rockwell Mfg. Co.*, 203 F.2d 846 (3rd Cir. 1953); *General Motors Corp.* v. *Estate Stove Co.*, 203 F. 2d 912 (6th Cir. 1953); *Interstate Rubber Products Corp.* v. *Radiator Specialty Co.*, 214 F.2d 546 (4th Cir. 1954); *Wasserman* v. *Burgess & Blacher Co.*, 217 F.2d 402 (1st Cir. 1954); and see *John Blue Co.* v. *Dempster Mill Mfg. Co.*, 275 F.2d 668 (8th Cir. 1960). But in two opinions by the late Judge Learned Hand, *Lyon* v. *Bausch & Lomb Optical Co.*, 224 F.2d 530 (2nd Cir. 1955), and *Reiner* v. *I. Leon Co.*, 285 F.2d 501 (2nd Cir. 1960), the Second Circuit took the position that it was the intent of Congress in Section 103 to restore *as a statutory command* the *Hotchkiss* rule and to repudiate all the intervening decisions which might indicate any stricter standard.

As might be expected, Graham and several of the *amicus curiae* strongly urge that the reasoning of Judge Hand is infallible, that the view he announced is correct and that the contrary circuits are wrong. We submit that *exactly the converse is true*. Section 103 no more contains the language of *Hotchkiss* v. *Greenwood* than it does the language of any other case. It is a paraphrase of the composite rule of many cases. The Senate and House Reports did not single out or mention any case or any court; they said that the rule of Section 103 "has been expressed in a large variety of ways in decisions of the *courts* and in writings" and that the provision "*paraphrases* language which has often been used in *decisions* of the *courts*".

Judge Hand's analysis, and the argument of Graham and the joining *amicus curiae*, is that decisions of this Court in the two decades before 1952 had departed from *Hotchkiss* v. *Greenwood*, had laid down more severe and obscure tests of invention, and that it was the intention of Congress to repudiate those stricter rules and return to *Hotchkiss*. We

submit, however, as we have shown in the preceding section of this brief, that the criticism of this Court's so-called stricter decisions is unwarranted, that the Court had not changed the rule, that it merely had insisted, as in *Cuno*, upon a strict adherence to the basic rule and that, within the bounds of the basic rule, it had set out in *A&P* a more thorough and complete statement as to when *a combination patent* will satisfy the basic standards.

We submit that the first sentence of Section 103 adopts as statutory law the requirements of invention which had been developed by this Court during a hundred years of labor and toil to preserve the Constitutional purpose and there is neither logic, legislative history, nor public policy to support the proposition that Congress intended to repudiate all of the intervening years and return to the embryo pronouncement of *Hotchkiss* v. *Greenwood* as the *alpha* and *omega* of inventive standards.

It is urged by some that since the Senate and House Reports state, among other things, that the "purpose of the proposed legislation is to *revise* and codify the laws relating to patents" (emphasis added by the contenders), the first sentence of Section 103 must be considered as a revision rather than a codification of existing law. In support of that argument they cite *Aro Manufacturing Co.* v. *Convertible Top Replacement Co.*, 377 U.S. 476, 12 L. Ed. 2nd 457, 84 S. Ct. 1526 (1964), in which this Court concluded that Section 271 of the Act (35 U.S.C., § 271) repudiated *Mercoid Corp.* v. *Mid-Continent Investment Co.*, 320 U.S. 661, 88 L. Ed. 376, 64 S. Ct. 268 (1944), and reinstated the doctrine of contributory infringement as it had been developed by the decisions prior to *Mercoid*. *The argument misses the mark.* Obviously, some sections of the statute represent revision. Section 271 on its face announces a rule which is contrary to *Mercoid* and logic compels the conclusion that there was

a revision. The same thing is not true of Section 103. The language there is consistent with and paraphrases the existing law; the Senate and House Reports say so, and the result is codification—not revision. *Amicus curiae* for the Illinois State Bar agree, Brief p. 4: "This section of the statute codified the law."

Graham and other *amicus curiae,* in support of their arguments, advert to the views expressed by various commentators on the Act, such as Senator Joseph C. O'Mahoney, Chairman of the Sub-Committee on Patents, Trademarks and Copyrights, Judge Giles S. Rich, of the United States Court of Customs and Patent Appeals, who was one of the drafters of the Act, Mr. P. J. Federico, Examiner-in-Chief of the United States Patent Office and one of the principal drafters of the Act, Mr. S. J. Crumpacker, who was a member of the House Judiciary Committee in 1952 and played an active part in the drafting and passing of the Act, and Mr. Charles J. Zinn, the House Committee's law revision counsel. We appreciate the views of such commentators and it may well be that some of their intents and purposes were not fully carried out in the Act and are not being carried out by the courts, as they interpret the Act, but we cannot substitute commentaries for the express language of the statute, the avowed purposes stated in the accompanying Senate and House Reports and indicative remarks from the floor, *e.g.:*

> "Mr. Wiley. I wonder whether the Senator will withhold objection * * *. The bill provides for a codification of the patent laws, and the House of Representatives has worked on this subject for 3 or 4 years. The bill simply constitutes a restatement of the patent laws of the United States." 98 Cong. Rec. 9096, 82nd Cong., 2nd Sess. (July 3, 1952).
>
> "Mr. Saltonstall. Mr. President, will the Senator from Nevada tell us the purpose of the bill?

"Mr. McCarran. The bill would codify the patent laws of the United States. It is under the able guidance of the Senator from Wisconsin (Mr. Wiley).

"Mr. Saltonstall. I am not a patent lawyer, but I know patents are a very technical subject. Does the bill change the law in any way or only codify the present patent laws?

"Mr. McCarran. It codifies the present patent laws. * * *" 98 Cong. Rec. 9323, 82nd Cong., 2nd Sess. (July 4, 1952).

The Second Sentence

Up to this point we have analyzed only the first sentence of Section 103 and, of course, the second sentence must be considered. It says:

"Patentability shall not be negatived by the manner in which the invention was made."

Graham and the *amicus curiae* urge that this sentence was aimed squarely at the "flash of creative genius" statement of the *Cuno* case, which was perhaps the "greatest departure" from *Hotchkiss*. The "Revision Notes" which are a part of the Senate Report lend credence to this view in the following statement:

"The second sentence states that patentability as to this requirement (non-obvious subject matter) is not to be negatived by the manner in which the invention was made, that is, it is immaterial whether it resulted from long toil and experimentation or from a flash of genius."

Several of the circuit courts have held that it was the intent of the last sentence of Section 103 to eliminate any requirement of a "flash of genius". *Pacific Contact Laboratories* v. *Solex Laboratories*, 209 F.2d 529 (9th Cir. 1954);

R. M. Palmer Co. v. *Luden's Inc.*, 236 F.2d 496 (3rd Cir. 1956). We have no particular quarrel with this conclusion. The sentence seems clear enough and the legislative material indicates the intent. We point out again, however, as we did at pages 56-57, *supra,* and as Judge Stephens for the Ninth Circuit did in *Pacific Contact Laboratories* v. *Solex Laboratories, supra,* that the phrase "flash of creative genius" as used by Mr. Justice Douglas in the *Cuno* case was never intended to establish any new rule or any requirement of "sunburst conception"; it was merely a picturesque selection of language and the long standing rule requiring an advance beyond the expected skill of the art was expressly reaffirmed therein. Rejection of the phrase "flash of creative genius" therefore changes no law and does no harm to this Court's guardianship of the Constitutional purpose.

A somewhat ancillary matter of terminology or doctrine posed by Judge Rich in his article, "The Vague Concept of 'Invention' as Replaced by Sec. 103 of the 1952 Patent Act", 46 Journal of the Patent Office Society 855 (Dec. 1964), merits some special attention. His thesis is that the design of Section 103 was to eliminate entirely "invention" as a requirement of patentability. He asserts that under the 1952 Act there are only three conditions of patentability, to wit: novelty, utility and non-obvious subject matter, and he was disappointed that both the Senate and House Reports stated that one of the "major changes or innovations in the title (Title 35) consist of incorporating a requirement for *invention* in Section 103." (Emphasis added). He is further disappointed that the courts, even Judge Hand in the *Bausch & Lomb* and *Reiner* cases, continue to talk of the requirement of invention under Section 103. He insists that in each *new* process, machine, manufacture, composition of matter, or new improvement thereof, there is invention and the question should be whether

the invention meets the conditions of patentability, *i.e.*, novelty, utility and non-obvious subject matter. He insists that such was the intent of the Act and that by shifting the approach the problems resulting from the "vague concept of invention" would be avoided. He has many disciples and on first blush his doctrine sounds good, but what does it really achieve? The concept of "invention" is thoroughly ingrained in our patent system and there can be no doubt of the basic standards to be applied. We fail to see where anything would be accomplished by changing the name of the condition of patentability from "invention" to "non-obvious subject matter". Nomenclature may more precisely define problems but it rarely solves them and when a change of nomenclature is attempted some of the wisdom of the past may be lost.

In summary, as to the effect of Section 103, we respectfully submit that it paraphrased and adopted the test of invention established by this Court as a condition of patentability from *Hotchkiss* to *A&P;* there was no intent to repudiate anything except the "flash of genius" phrasing; and this Court's established standards are still proper under the statute.

When the test is applied to a specific case it makes no real difference whether we inquire: "Was there merely an exercise of the skill of the calling, an advance plainly indicated by the prior art?" or "Was the subject matter as a whole obvious to one having ordinary skill in the art?" The phrasing does not change the inquiry. We are still looking for the unexpected, the unobvious, the surprising thing which marks an advance in the art of sufficient consequence to justify the grant of a statutory monopoly. We must always inquire: (1) What was the problem? (2) What was done? (3) What was the state of the art? (4) What was the level of ordinary skill? (5) What was achieved? and

(6) Was it unexpected, surprising or unobvious to one having ordinary skill in the art?[7]

Constitutionality of Section 103

No point of constitutionality has been raised below and that question is not here for review. Since the question of constitutionality of Section 103 has been discussed by some of the *amicus curiae*, however, we will comment briefly.

We have no doubt that Section 103 is *per se* a proper exercise of the power granted to Congress under Article I, Section 8, Clause 8 of the Constitution, particularly when it is construed (as we think it should be) as a mere adoption of the minimum standards of "invention" or "patentability" which this Court had established.

If, however, the section is construed (as some contend it should be) as an attempt by Congress to overrule the former decisions of this Court and establish a test of "invention" or "patentability" which is less strict, it would be unconstitutional.

For example, this Court said in *A&P* that in order for a combination of old elements to involve invention it must produce some unexpected or surprising consequence. If it does not do so it does not promote the progress of science or useful arts and Congress has no power to authorize a patent

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7. In the present case it is not necessary to determine which of these inquiries are fact questions that may be set aside under Rule 52a, Federal Rules of Civil Procedure, only if clearly erroneous, and which are law questions that may be set aside if the appellate court merely disagrees with the trial court. We have assumed under Point I that they are all questions of fact and we have shown, as the Eighth Circuit ruled, that the trial court was clearly wrong. We believe however that the ultimate question of "invention" or "patentability" is one of law. See *Great A. & P. Tea Co.* v. *Supermarket Equipment Corp., supra; Armour & Co.* v. *Wilson & Co.*, 274 F.2d 143, 151 (7th Cir. 1960); and Rich, "The Vague Concept of 'Invention' As Replaced By § 103 of the 1952 Patent Act", 46 Journal of the Patent Office Society 855, 872, note 36.

monopoly for such a device. Thus, if Section 103 is construed as an attempt by Congress to overrule A&P and authorize the grant of a patent upon a combination of old elements which does not achieve any unexpected or surprising consequence it would be an attempt by Congress to authorize a patent for a device which does not in fact promote the progress of science or useful arts, and it would be unauthorized.

Congress has broad power concerning the patent system but it has no power to authorize patents which do not serve the constitutional purpose. We do not believe it attempted to do so in Section 103.

798 Revisited

Turning back to 798 we believe it should now be clear beyond any doubt that:

(1) In the *Jeoffroy* and *Cockshutt* cases the Fifth Circuit found invention in the achievement of "an old result in a cheaper and otherwise more advantageous way" a "better result than the prior art afforded", and those tests are inadequate under the decisions of this Court and under § 103 of the statute.

(2) In the case at bar the trial court phrased its finding or conclusion of invention in the words of § 103 but both the subsidiary findings of fact and the ultimate finding of "invention" or "non-obvious subject matter" were unsupported by the evidence and were clearly erroneous.

(3) The Court of Appeals for the Eighth Circuit properly applied both the decisions of this Court and § 103 and correctly found the 798 patent invalid for lack of "invention" or "non-obvious subject matter".

CONCLUSION

In conclusion, we respectfully submit that Patent No. 2,627,798 is invalid and the judgment of the Court of Appeals for the Eighth Circuit should be affirmed.

Respectfully submitted,

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